

**ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE**

February 1, 2023

3:30 p.m.

MEMBERS PRESENT

Senator Click Bishop, Co-Chair
Senator Cathy Giessel, Co-Chair
Senator Bill Wielechowski, Vice Chair
Senator Scott Kawasaki
Senator James Kaufman
Senator Forrest Dunbar
Senator Matt Claman

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

PRESENTATION(S): RAILBELT ELECTRIC ENERGY SYSTEM AND ENERGY
TRANSITION

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

BRAD JANORSCHKE, General Manager
Homer Electric Association
Homer, Alaska

POSITION STATEMENT: Participated in the presentation on the
Railbelt Energy System and Energy Transition.

ARTHUR MILLER, Chief Executive Officer (CEO)
Chugach Electric Association
Anchorage, Alaska

POSITION STATEMENT: Participated in the presentation on the
Railbelt Energy System and Energy Transition.

TONY IZZO, Chief Executive Officer (CEO)
Matanuska Electric Association

Palmer, Alaska

POSITION STATEMENT: Participated in the presentation on the Railbelt Energy System and Energy Transition.

JOHN BURNS, President and Chief Executive Officer (CEO)

Golden Valley Electric Association

Fairbanks, Alaska

POSITION STATEMENT: Participated in the presentation on the Railbelt Energy System and Energy Transition.

ACTION NARRATIVE

[3:30:09 PM](#)

CO-CHAIR CATHY GIESSEL called the Senate Resources Standing Committee meeting to order at 3:30 p.m. Present at the call to order were Senators Dunbar, Claman, Kaufman, Co-Chair Bishop and Co-Chair Giessel. Senators Kawasaki and Wielechowski joined the meeting during introductions.

PRESENTATION(S): RAILBELT ELECTRIC ENERGY SYSTEM AND ENERGY TRANSITION

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CO-CHAIR GIESSEL announced the committee would hear a presentation from the Railbelt utilities about the Railbelt Electric Energy System and Energy Transition. She listed the presenters and asked them to introduce themselves. She conveyed that the panel requested the committee hold their questions until the end of the presentation.

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BRAD JANORSCHKE, General Manager, Homer Electric Association, Homer, Alaska, introduced himself and provided the following information about the Railbelt electric utilities:

- They provide power to more than 75 percent of the population in the state.
- The Railbelt electric system stretches 700 miles.
- The average cost of power on the Railbelt is low compared to the rest of the state, and is comparable to areas in the Lower-48
- Railbelt utilities use 41 percent of the available Cook Inlet Natural Gas.

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MR. JANORSCHKE displayed a topographic map of the Railbelt that shows the existing transmission line. He characterized it as a public highway for electrons. This single line has three load balancing areas (LBAs): the Kenai Peninsula, Anchorage and the MatSu Valley, and Fairbanks or the Interior. It passes through avalanche chutes and heavily forested areas, much of which is on public land.

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MR. JANORSCHKE displayed the key elements of the presentation:

- Natural gas supply
- Diversification
- Transmission/energy storage infrastructure
- Rate stability

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ARTHUR MILLER, Chief Executive Officer (CEO), Chugach Electric Association, Anchorage, Alaska, directed attention to a line graph of the historic production in Cook Inlet from 2000 to 2021, the projected production through 2040, and the 70 bcf/year demand. It clearly illustrates that the continued decline of Cook Inlet gas reserves is a critical issue for the Railbelt utilities. In fact, last May one of the major Cook Inlet producers said they were not going to extend their existing contracts with the utilities as currently structured. DNR's 2022 reserve report corroborated the expectation of continued decline. This downward trajectory is happening despite significant events that have occurred on both the supply and demand sides. The closure of the Agrium fertilizer plant in 2007 reduced demand and added 50 bcf to the supply for the utilities; production tax incentives passed in 2013 and 2014; Hilcorp acquired Marathon Oil which resulted in an uptick in production; and the Kenai export authority closed in 2018. Additional discoveries in Cook Inlet will help but the real solution is for the utilities to look for alternative means to fill the gap between supply and demand.

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MR. MILLER directed attention to the bar graph of the mean case projected volumes of proved developed and proved undeveloped Cook Inlet gas from 2022 through 2041. It shows that supply meets demand through 2026. After that there's a gap between supply and demand. He explained that utilities make decisions based on reliability and the provision of optimal generation assets to meet customer demand at the lowest cost possible.

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MR. MILLER reviewed the options for a long-term solution to fill the gap between supply and demand that benefits Alaskans. Ideally, he said that would be to increase the supply of instate gas, but the utilities are also looking at alternative clean energy technologies and renewable generation. This helps but it's not the ultimate solution to fill the gap. It's also necessary to look at how those technologies can be effectively integrated into the existing system.

The utilities are also monitoring the events of the AKLNG project. It would be a significant advantage if that project could deliver gas to Southcentral at \$4-\$5/mcf. The current market price is in the vicinity of \$7.50-\$8/mcf. He noted that Mr. Richards with AKLNG said gas could be delivered to Southcentral on a first phase basis in the 2027-2028 timeframe. He pointed out that access to reasonably priced gas is critically important to the cost of electricity. In the Railbelt, gas comprises 20-30 percent of the cost for electricity. For Chugach Electric, a \$1 increase in the cost of gas translates to a \$4 increase in electric rates.

MR. MILLER reported that the utilities were also reluctantly looking at LNG import opportunities. He opined that it was unfortunate that a state as resource rich as Alaska should have to look at importing LNG. Nevertheless, this avenue was being pursued and the result of these efforts were expected to be released later in 2023. He noted that, as time passes, the options were narrowing and a decision had to be reached regarding LNG. He wanted the legislature to be aware of this and that an ask may come after that. He also mentioned that the transition will require significant energy storage capabilities for gas as well as battery storage and transmission upgrades.

MR. MILLER stated that the Railbelt utilities have to make a decision about the path forward in the next 12-15 months. He said the utilities aren't asking for anything today. Rather, they want to make sure the legislature is aware of the situation and after the study work is completed they return to present their recommendations and submit their request.

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TONY IZZO, Chief Executive Officer (CEO), Matanuska Electric Association (MEA), Palmer, Alaska, stated that MEA serves the second largest population center in the state and was probably the only utility that continually experiences growth. He described MEA's gas contract as one of the better ones. It's

about \$8 delivered to the power plant. If the price were \$5 delivered, it would return \$10 million/year into the MatSu Valley economy.

MR. IZZO stated that the Railbelt utilities had worked diligently on the approach going forward. He directed attention to the Railbelt clean energy goals outlined on slide 8.

Focus is on achievable, sustainable energy policy:

- Diversification of generation sources
- A sensible approach with no adverse effect on rates or reliability
- Fosters and encourages collaboration with stakeholders
- Provides energy security.
- Maximizes carbon reductions.

He said technology is advancing quickly and the Railbelt utilities want to plan for this with as much prudence as possible.

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MR. IZZO displayed the cost comparison chart of the historical cost of different generation sources. It shows, in descending order of cost, the 2020 Hawaii wind power purchase agreement; EVA Creek Wind-Alaska; Northeast US Regional Solar; Fire Island Wind-Alaska; the Railbelt utility average cost of power; and South US Region Solar. He stated that the average cost of power in the Railbelt is \$0.19 and lower prices would facilitate economic development, the economy in general, members, and ratepayers.

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JOHN BURNS, President and Chief Executive Officer (CEO), Golden Valley Electric Association, Fairbanks, Alaska, stated that the committee heard about the importance of having a stable supply of natural gas and diversified generation, but it is also important to be able to transmit that energy over a reliable and robust transmission system.

The Railbelt's vision of transmission is very pointed. It is to lower the cost of electricity across the entire Railbelt to ensure that the lowest cost electron can be dispatched from wherever it is generated, and from whatever source to wherever it is needed. The delivery must be reliable, efficient, and at the lowest cost possible. By doing so, this will serve as a

catalyst for economic growth. To achieve that vision, requires a reliable, resilient, and redundant transmission system. It must be unconstrained, not vulnerable to a single point of failure, and have the capacity to accommodate energy generation from all potential sources.

Implementing the Railbelt vision will be done in four stages.

1. Upgrade the existing transmission system.
2. Add southern and northern transmission lines.
3. Build the road-belt transmission line that runs between Anchorage, Palmer, Glennallen, and Delta Junction.
4. Add energy storage strategically along the Railbelt at Homer, Anchorage, and Fairbanks.

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MR. BURNS stated that this vision is nothing less than transformative for the Railbelt and the state. He listed the projected achievements.

- Increased availability of generation and unconstrained dispatch. This is getting the energy to whatever location at the lowest price.
- Increased clean energy generation, including renewables.
- Increased transfer capabilities.
- Economies of scale. There is a difference between a 40 megawatt wind project that provides \$0.10 or \$0.11 per kilowatt and a 100 megawatt project that provides \$0.065.
- Support for the military mission in Alaska. The five bases on the Railbelt need reliable energy.
- Allow economic development.
- Rate stability will benefit Power Cost Equalization communities.

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MR. BURNS stated that to achieving the Railbelt vision will require sustained leadership and a commitment to transform the vision into reality. He spoke to four legislative priorities to drive down energy costs and promote economic growth.

- A reasonably priced and long-term supply of natural gas, preferably in-state.
- Transmission infrastructure and energy storage buildouts.
- Leveraging state and federal money to maximize the opportunity to achieve the transmission upgrades that have been discussed.

- An economic and affordable transition to lower carbon.

MR. BURNS stated that the Railbelt utilities are committed to assist any way they can to obtain these objectives.

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SENATOR KAUFMAN asked if the transition had a resource-loaded integrated schedule that shows all the tasks, the resources needed for the task, and how they will be delivered

MR. BURNS replied there is no specific document, but they had been evaluating the transition and members had looked at different aspects of the project with the Alaska Energy Authority (AEA). The required projects were established and the Railbelt committed \$166 million for the southern transmission upgrade. The transition will be done in phases with the entire buildout expected to happen over 10-12 years. He added that, as committed as the Railbelt utilities are, they can do only so much; it will also take federal and state efforts.

SENATOR KAUFMAN requested information about the current cost per kilowatt from the various sources of supply that will feed into the grid.

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MR. IZZO added to Mr. Burns' response saying that some stage gates were in place. Working with ENSTAR and the Interior Gas Utility, the gas supply options were being analyzed and should be complete by June. The costs will be more clearly identified as the options are narrowed. Another stage gate is transmission, which is being coordinated with AEA. Documents have been filed and they were waiting to hear from the Department of Energy about whether they will be invited to apply. He noted that \$15.9 million could be spent over a 15-year period to get a first-world transmission system.

To the question about cost per kilowatt by individual source, he said it depends on the source. A 40 megawatt wind project would cost \$0.11/KWh. Under current statute, the Regulatory Commission of Alaska (RCA) would find that was not in the consumer's interest because it was too expensive, unless the utility could demonstrate it was out of gas tomorrow. A 100 megawatt wind project could produce \$0.06/KWh power but it's necessary to have the infrastructure to get that power into the grid. However, the existing interties are constrained.

MR. IZZO said another consideration is that while meteorological evaluation towers (MET) are collecting data on wind as a power supply, they aren't found in population centers so transmission and infrastructure will be needed to get to those tower locations.

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SENATOR KAUFMAN expressed concern that alternate energy sources include nuclear, which seemed to be at odds with the talk about energy resilience and energy security. He said he was looking for the plan that mitigates the risk of transitioning from the current state to the future. He asked if that was the forthcoming plan that was previously mentioned.

MR. IZZO said the work to look at the inputs to the system was ongoing but reliability was a key consideration. It's the reason he said MEA will still need 4 bcf of gas in 2040. MEA has all the gas under contract it needs until March 31, 2028. Then next day it has zero. Hilcorp will likely step up and there will be an additional contract, but it might be only half of the present supply. That's five years to figure out, permit, and finance the collective supply to ensure reliability and shift away from the paradigm of every 10 years trying to breathe additional life into something that always seems to cost more.

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CO-CHAIR BISHOP asked the presenters how they would solve the problem if they had \$1.3 billion.

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MR. JANORSCHKE said the first step would probably be to improve the transmission and redundancy with a focus on batteries. However, nothing matters if there isn't any gas. In contrast to MEA, Homer Electric Association's (HEA) supply of gas under contract ends March 31, 2024. He said he's slowly warming to importing LNG but the members won't like it any more than an Alaska fisherman would accept farmed salmon as a good idea.

He talked about what a good investment the state made in Bradley Lake and that all the utilities would like to get 100 percent of their power from a renewable like that. He relayed that he often tells the HEA board that the first priority is to keep the lights on and the second is to keep upward pressure off the rates. Last year HEA was nearly 90 percent dependent on natural gas. It represents about one-third of ratepayers' electric bill. It's a straight passthrough from the suppliers of natural gas to

members. None of that helps the cooperative to pay any of the bills other than the natural gas.

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CO-CHAIR BISHOP clarified that he asked the question because the current situation wasn't new. The state has put \$1.3 billion in cash credits into Cook Inlet over the last 10-12 years and the situation had not changed. He agreed that upgrading transmission was a good starting point.

MR. MILLER opined that the best use of the funds would be something like Bradley Lake. Its useful life is about 100 years. That benefit is generational. It displaces gas, it's a clean energy technology, it provides diversification of generation, and it's an asset with a 100-year life. The benefit goes directly to the consumers.

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MR. IZZO said the utilities need gas so some of the \$1.3 billion needs to secure contracts, but the majority needs to be invested in infrastructure, so the paradigm can shift. Infrastructure is agnostic to fuel, but it has to be reliable. It may be necessary to pay more for the gas that can be produced in the interim versus making an investment of hundreds of millions of dollars in something like LNG imports, which will create another host of issues.

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MR. BURNS stated that the transmission system would be built out over time. Ideally, the \$1.3 billion would be spent in \$250-\$300 million tranches over time. This would create job opportunities and growth within Alaska. The ancillary benefit of that becomes huge in terms of being able to integrate diverse generation into the system. Without question, it's a heavy lift; the total cost of transmission is estimated to be \$2.9, but that's to be built over time. The intention is for the investment that pays dividends in the long run. It grows the economy. For example, the road belt provides the opportunity for economic growth. The opportunities in areas of the state that are unserved by electricity are huge. He specifically mentioned mining.

CO-CHAIR BISHOP asked if the clean energy that's been mentioned included coal and if it has direct capture sequestration potential.

MR. MILLER responded that carbon sequestration falls under the definition of clean energy.

MR. JANORSCHKE said he would take a hard look at clean coal if it reduced the upward pressure on the cost of power. He spoke about the importance of diversity, the lack of incentive for exploration companies when there's no market, love for long-term contracts, the change in business when the export facility closed, and the risk of relying on just one resource. He mentioned independent power producers (IPP) and said any of the utilities would go after a cheaper source of power if given the chance. However, IPPs don't have the obligation that utilities have to ensure that the lights stay on. He noted that the Tesla battery installation was a success. They're used to control the ramp rates of non-firm resources.

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SENATOR CLAMAN asked each of the presenters what their first option would be to fill the gap between production and demand that's projected to occur in 2027.

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MR. MILLER said the impact to utilities differs based on contractual requirements with Hilcorp. He spoke to CEA's contractual situation, the large-scale wind and solar projects they are evaluating, and that those projects will fill just a small portion of CEA's gas requirements.

To the question about the first step to fill the gap if Alaska LNG doesn't become a reality, he opined that it would be importing LNG, which could be a transition project.

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SENATOR CLAMAN recapped that CEA will see a shortfall starting in 2028, and the utility's first alternative for gas is imported LNG.

MR. MILLER answered in the affirmative with the optimistic caveat for Alaska LNG.

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MR. IZZO said he interprets the graph several ways, one of which is that he's seen worse. He mentioned: MEA's contract with Hilcorp through 2027, that an internal analysis shows deliverability problems starting as soon as 2025, and MEA's interest in partnering in any large-scale renewable. He emphasized continuing to work on transmission infrastructure to make it possible to shift the paradigm.

MR. IZZO said he was sure that LNG import was going to be the answer, but there will be investment needs. His concern was that those investments would be made and two years after that ground would be broken on a North Slope pipeline.

SENATOR CLAMAN recapped that the short answer is that there may be a shortfall by 2025, and he didn't see a path in the short term that doesn't involve importing LNG.

MR. IZZO confirmed that was accurate.

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MR. JANORSCHKE said the short answer is there will obviously be a shortfall, and imported LNG will be part of the transition plan.

SENATOR CLAMAN asked where on the timeline he sees the shortfall.

MR. JANORSCHKE described Nikiski as the Henry Hub of Alaska for deliverability and said he was optimistic that the suppliers would not allow the Kenai Peninsula to go black. It would be an issue for the entire state. He opined that the long-term solution would include importing LNG. He continued that if investing in an import facility is a way to guarantee that a gas pipeline would start in two years, he'd recommend investing today.

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MR. BURNS said that, compared to Southcentral, GVA has very little gas and its members pay more than any of the utilities on the Railbelt. The cost comes from importing the energy up the intertie from Southcentral. He mentioned GVA's diverse mix of energy, adding environmental upgrades to the most reliable plant, shutting down Healy 2 because it's unreliable and adds to member's costs, continuing to look for additional renewables, and long duration energy storage.

MR. BURNS stated that he was steadfast in his view that all the utilities are in this together and if imported natural gas was the answer, so be it.

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SENATOR CLAMAN referenced Senate Bill 123 that created Electric Reliability Organizations (ERO) that relate to transmission. He asked when those might be up and running because it seemed as though it should have happened.

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MR. IZZO explained that the RCA recently certificated the Railbelt Reliability Council (RRC) as the electric reliability organization (ERO), and the filing related to tariff and budget was likely to be settled later this year. He optimistically estimated that adopting and instituting reliability standards and conducting an integrated resource plan that looks at the entire system would take another two to three years. The collective decision is to take this path he said, but having gas and infrastructure is the underpinning to make this possible.

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SENATOR KAWASAKI said he didn't know that a coal plant would be an option, but he appreciated the work the utilities had done to achieve clean energy goals and reduce emissions while keeping rates as low as possible for ratepayers.

He asked for the current capacity of the intertie north to Fairbanks, and what the state needed to do to help the entire Railbelt.

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MR. BURNS answered that the size of the Alaska Intertie is 138 megawatts and it can carry 70 megawatts of energy. A focus in the first stage is to upgrade the carrying capacity of the existing Alaska Intertie significantly.

SENATOR KAWASAKI mentioned GVA's work on long term clean energy proposals and that he just heard from Doyon Utilities about the proposal to combine the heat and power plant on the military base at Fort Wainwright. He assumed the electricity would be purchased from somewhere on the grid but wondered how that would work if demand for that power already was at capacity.

MR. BURNS said that highlights the need to start today on the infrastructure buildout because the electrons need to flow from the point of generation without constraint. He said the surest way to resolve Fairbank's continuing struggle with the PM 2.5 air quality issue is to electrify, but that can't be done without expanded generation and an upgraded transmission system.

MR. BURNS stated that from Golden Valley's perspective, all the utilities are generation, transmission, and distribution. However, if it's in the best interest of the ratepayers and there is assurance of reliable and lower cost energy, GVE

doesn't need to be an owner or operator. It can be solely a distribution facility.

4:53:09 PM

SENATOR KAWASAKI expressed appreciation that all the utilities were working together. He then asked if the issue of the length of the contracts was being worked on today.

MR. IZZO replied that there was an ongoing discussion with the current producers and others. His belief is that a compromise solution will result, but he can't count on that.

Following up on Senator Claman's comments about the ERO and Senate Bill 123, he clarified that an integrated resource plan was what that group is tasked with doing. It would be problematic to legislatively mandate that now because doing so is fixing the answer before the group figures out the plan.

4:56:17 PM

SENATOR DUNBAR echoed Senator Kawasaki's comments about having the utilities appearing together.

He referenced to the legislative priority on slide 12 that cites "Reasonably priced long-term in-state supply of natural gas." He asked what the utilities need from the legislature to facilitate imported LNG if it has to happen.

MR. MILLER said the intent of the update was to make the committee aware of the situation the utilities face and what they are doing. Once they complete their analyses and studies, they would like to return with a specific direction and request regarding gas.

CO-CHAIR GIESSEL thanked the presenters and relayed that the committee would look forward to meeting after the analyses and studies are complete.

MR. MILLER thanked the committee for the invitation to give an update. He relayed that all the utilities are focused on clean energy and they are talking with the Cook Inlet producers. They are hopeful, but realize they can't rely on hope alone.

5:00:31 PM

MR. BURNS said everyone has the best interest of the state at heart, and everyone is focused on driving down the cost of energy. Aside from ensuring a stable supply of natural gas, what can be done today is for the state to adopt the vision for a

long-term plan to improve transmission. It is critical to whatever generation there is. If the federal money that's anticipated doesn't materialize, this long-term plan is still critical. He reiterated that it has to be the state's plan moving forward. That's the pointed request, he said.

[5:02:19 PM](#)

MR. IZZO said he appreciates the idea of coming back. He continued to say that a decision on LNG import may not be popular, but it could be a bridge and an LNG storage facility will be an asset going forward because it will improve reliability.

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MR. JANORSCHKE thanked the committee for the opportunity to have the conversation.

SENATOR GIESSEL expressed appreciation for the unified message.

[5:05:58 PM](#)

There being no further business to come before the committee, Co-Chair Giessel adjourned the Senate Resources Standing Committee meeting at 5:05 p.m.